AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Canceled).

2. (Currently Amended) A bipolar article, the article comprising:

(a) a housing comprising an inside surface; wherein the inside surface has an arbitrary form factor which is not cylindrical or prismatic;

(b) a bipolar structure comprising a cathode current collector, an anode current collector, an anode, a cathode, and an electrolyte in contact with and separating the anode and cathode; wherein the anode and cathode are interpenetrating; the cathode current collector is in electronic communication with the cathode; and the anode current collector is in electronic communication with the anode;

wherein the bipolar structure as a whole has an arbitrary form that is not cylindrical or prismatic; and at least one of the cathode, the anode, and their respective current collectors is conformal to the inside surface of the housing; ~~The article of claim 91,~~

wherein the anode and cathode are self-assembling networks of particles disposed in the electrolyte[[,]]; and

wherein the cathode current collector is attractive to the cathode network and repulsive to the anode network, and the anode current collector is attractive to the anode network and repulsive to the cathode network.

3. (Original) The article of claim 2, wherein one or both of the anode and cathode current collectors comprises a coating providing a repulsive force between the current collector and the opposite anode or cathode network.

4. (Previously Presented) The article of claim 3, wherein the coating includes one or more of a conductive oxide, polythiophene, polyaniline, poly(o-methoxyaniline) (POMA), poly(3-octylthiophene) (POTh), poly(3,4-ethylene dioxythiophene) (PEDT), poly(3,4 ethylene dioxythiophene)-polystyrene sulfonate (PEDT-PSS), poly(vinylidene fluoride) (PVDF), poly(ethylene oxide) (PEO), polytetrafluoroethylene (PTFE), and derivatives thereof.

5. (Cancelled).

6. (Cancelled).

7. (Cancelled).

8. (Cancelled).

9. (Cancelled).

10. (Cancelled).

11. (Previously Presented) A bipolar article having an arbitrary form factor, the article comprising:

(a) a bipolar structure having an anode, a cathode, and an electrolyte in contact with and separating the anode and cathode;

(b) a cathode current collector that is in electronic communication with the cathode; and

(c) an anode current collector that is in electronic communication with the anode,

wherein the anode and cathode are self-assembling networks of particles disposed in the electrolyte, the cathode current collector is attractive to the cathode network and repulsive to the anode network, and the anode current collector is attractive to the anode network and repulsive to the cathode network, and

wherein the bipolar article as a whole has an overall form that is not cylindrical or prismatic, the form including a thickness that varies across the length or width of the article.

12. (Cancelled)

13. (Cancelled)

14. (Previously Presented) The article of claim 11, wherein one or both of the anode and cathode current collectors comprises a coating providing a repulsive force between the current collector and the opposite anode or cathode network.

15. (Previously Presented) The article of claim 14, wherein the coating includes one or more of a conductive oxide, polythiophene, polyaniline, poly(o-methoxyaniline) (POMA), poly(3-octylthiophene) (POTh), poly(3,4-ethylene dioxythiophene) (PEDT), poly(3,4 ethylene dioxythiophene)-polystyrene sulfonate (PEDT-PSS), poly(vinylidene fluoride) (PVDF), poly(ethylene oxide) (PEO), polytetrafluoroethylene (PTFE), and derivatives thereof.

16. (Cancelled)

17. (Original) A device comprising the bipolar article of claim 11.

18. (Previously Presented) The device of claim 17, wherein the arbitrary form factor of the bipolar article is conformal with at least one surface of the device.

19. (Previously Presented) The device of claim 17, wherein the device has a cavity, and wherein the arbitrary form factor of the bipolar article is space-filling within the cavity.

20. (Original) The device of claim 17, wherein the device is a cellular telephone, laptop computer, personal digital assistant, or toy.

21. (Original) The article of claim 11, wherein the bipolar article is a battery.

22-93. (Cancelled).